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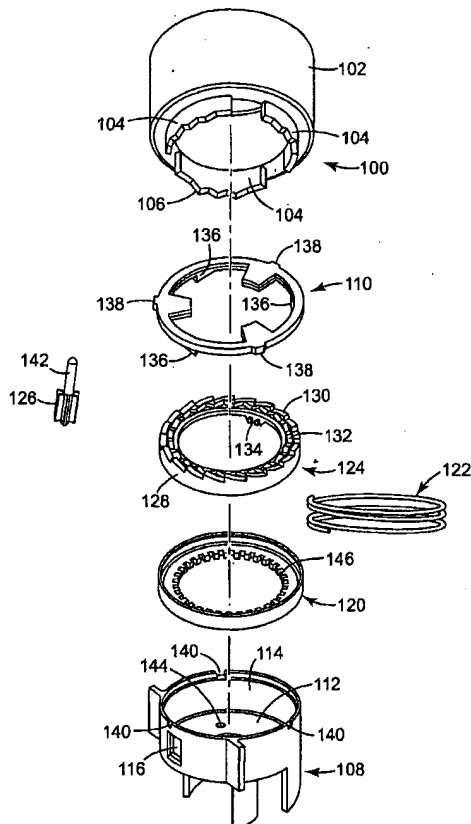
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(54) Title: DOSE COUNTER FOR DISPENSERS



(57) Abstract: A dose counter for an inhaler comprising a container for
medicament equipped with a reciprocation means to dispense medicament,
comprising: a fixed ratchet member, a reciprocal trigger member coordi-
nated with the reciprocal movement between the actuation means and the
container, said reciprocal movement comprising an outward stroke and a
return stroke, a counter member undergoing a counting movement each
time a dose is dispensed, the counter member being biased towards the
ratchet and trigger members and moving in a direction orthogonal to the
direction of reciprocal movement of the trigger member, the counter mem-
ber comprising: a first region having at least one inclined surface which
is engaged by the trigger member during its outward stroke causing the
counter member to move, and a second region having at least one inclined
surface which is engaged by the ratchet member during the returned stroke
of the trigger member completing the counting movement.



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/39926

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B65D 88/54; B67D 5/24, 5/22

US CL : 222/30, 36, 38, 321.9

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 222/30, 36, 38, 321.9

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,164,494 A (MARELLI) 26 December 2000 (26.12.2000), see entire document.	1-7
X	US 5,799,651 A (GARBY et al) 01 September 1998 (01.09.1998), see entire document.	1-7
Y	US 6,234,168 B1 (BRUNA) 22 May 2001 (22.05.2001), see entire document.	1-7
Y	US 6,283,365 B1 (BASON) 04 September 2001 (04.09.2001), see entire document.	1-7



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

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"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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document member of the same patent family

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INTERNATIONAL SEARCH REPORT

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PCT/US04/39926

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☒ Claims Nos.: 8-18
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of any additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

- Remark on Protest**
- | | |
|--------------------------|---|
| <input type="checkbox"/> | The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee. |
| <input type="checkbox"/> | The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation. |
| <input type="checkbox"/> | No protest accompanied the payment of additional search fees. |